

## **CLAIMS**

1. A system for providing accounting for a wireless network, the system including:  
an access point connectable to a mobile client;  
a wireless integrated node connected to the access point and configured for providing and mapping between two different communication protocols; and  
a link for connecting the wireless integrated node to a charging gateway and further to an accounting system, wherein the accounting system provides a bill for usage of the wireless network by the mobile client;  
wherein the first communication protocol is of a format required by the wireless network and the second communication protocol is of a format required by the accounting system.
2. The system of claim 1 wherein the wireless integrated node includes means for generating a call detail record for use with the second communication protocol.
3. The system of claim 2 wherein the generating means maps RADIUS elements to the call detail record.
4. The system of claim 3 wherein the generation means is triggered by receiving a RADIUS Accounting Status (start) message at the wireless integrated node.
5. The system of claim 3 wherein the generation means is triggered by receiving a RADIUS Accounting Status (interim) message at the wireless integrated node.
6. The system of claim 3 wherein the generation means is triggered by receiving a RADIUS Accounting Status (stop) message at the wireless integrated node.

7. A method for generating call detail records in a format used with a mobile network for a client having an account with the mobile network and using a wireless local area network, the method comprising:

receiving a RADIUS start message from an access point;

generating a first Call Detail Record (CDR) from accounting information contained in the RADIUS start message; and

sending the first CDR message to a charging gateway associated with the mobile network.

8. The method of claim 7 wherein the mobile network is a GPRS network and the charging gateway is capable of forwarding the first CDR to an accounting system of the GPRS network.

9. The method of claim 7 further comprising:

periodically sending additional CDRs to the charging gateway during the course of the association with the access point.

10. The method of claim 7 further comprising:

receiving a RADIUS interim message from the access point;

generating a second CDR from accounting information contained in the RADIUS interim message;

sending the second CDR to the charging gateway.

11. The method of claim 10 further comprising:

continually receiving additional RADIUS interim messages;

generating additional CDRs from accounting information contained in the additional RADIUS interim messages; and

sending the additional CDRs to the charging gateway.

12. The method of claim 7 further comprising:  
receiving a RADIUS stop message from the access point;  
generating a stop CDR from accounting information contained in the RADIUS stop message; and  
sending the stop CDR message to the charging gateway.
13. The method of claim 7 wherein the step of generating the first CDR includes:  
obtaining some parameters for the first CDR from the account information contained in the RADIUS start message in real time; and  
internally generating other parameters for the first CDR from a configuration file.
14. An authentication server comprising:  
a first link connected to an authenticator associated with a Wireless Local Area Network (WLAN);  
a second link connected to a gateway associated with a mobile network; and  
a mapping system including instructions for receiving one or more first messages from the authenticator, the first messages being of a first type associated with the WLAN but not the mobile network; generating a first group of one or more call detail records from the received first messages, the call detail records being of a second type associated with the mobile network; and sending the first group of call detail records to the gateway.
15. The authentication server of claim 14 wherein the one or more first messages are associated with a client of the WLAN and the mapping system further comprises instructions for periodically sending additional call detail records to the charging gateway while the client is using the WLAN.
16. The authentication server of claim 14 wherein the mapping system further comprises instructions for receiving one or more second messages of the first type from the access point; generating a second group of one or more CDRs from accounting information contained in the one or more second messages; and sending the second group of one or more CDRs to the charging gateway.

17. The authentication server of claim 16 wherein the mapping system further comprises instructions for receiving one or more third messages of the first type from the access point; generating a third group of one or more CDRs from accounting information contained in the one or more third messages; and sending the third group of one or more CDRs to the charging gateway.

18. The authentication server of claim 14 whereby the charging gateway is configured for forwarding the first group of one or more of the CDRs to an accounting system of the mobile network.

19. The authentication server of claim 14 further comprising a configuration file and wherein the instructions for generating a first group of one or more call detail records includes instructions for obtaining some parameters from the account information contained in the one or more first messages in real time and instruction for internally generating other parameters from the configuration file.

20. The authentication server of claim 14 wherein the mobile network is a packet data network.